CFP2000 Result

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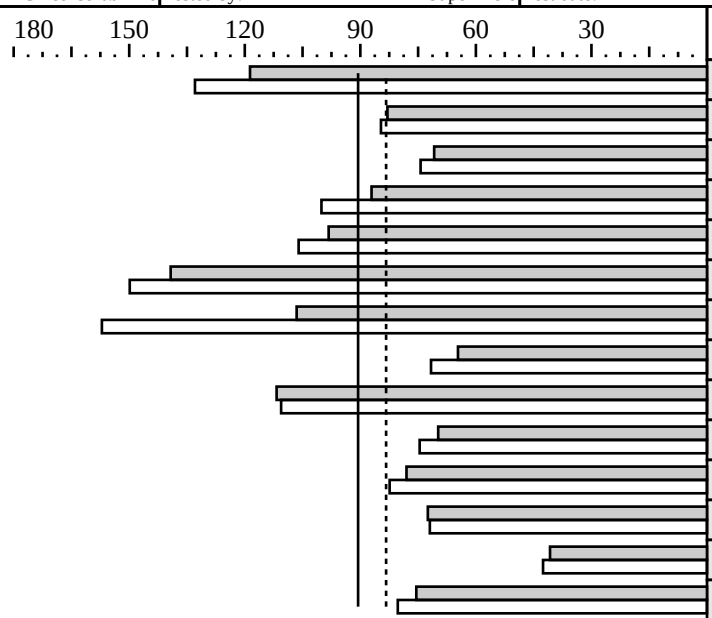
Supermicro

Motherboard H8DM8-2 , AMD Opteron(TM) 2218

SPECfp_rate2000 = 90.6

SPECfp_rate_base2000 = 83.3

SPEC license #01176 | Tested by: Supermicro | Test date: Sep-2006 | Hardware Avail: Sep-2006 | Software Avail: Aug-2005



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	62.6	119	4	55.8	133
171.swim	4	173	83.0	4	170	84.6
172.mgrid	4	118	70.8	4	112	74.4
173.applu	4	112	87.1	4	97.3	100
177.mesa	4	66.1	98.2	4	61.3	106
178.galgel	4	96.6	139	4	89.8	150
179.art	4	113	107	4	76.8	157
183.equake	4	93.3	64.6	4	84.2	71.6
187.facerec	4	78.9	112	4	79.7	111
188.ammp	4	146	69.8	4	137	74.6
189.lucas	4	119	78.0	4	113	82.4
191.fma3d	4	134	72.5	4	135	72.0
200.sixtrack	4	125	40.8	4	120	42.6
301.apsi	4	160	75.5	4	150	80.3

Hardware

CPU:	AMD Opteron(TM) 2218 processor
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1, 2
Parallel:	No
Primary Cache:	64KBI + 64KBD on chip per core
Secondary Cache:	1024KB (I+D) on chip per core
L3 Cache:	N/A
Other Cache:	N/A
Memory:	8x2048MB, DDR2-667 Dual Rank CL4 ECC Reg
Disk Subsystem:	SATA, 400 GB
Other Hardware:	None

Software

Operating System:	SuSE Linux Enterprise Server 9 for AMD64, SP3
Compiler:	PathScale EKOPath(TM) Compiler Suite, Release 2.3
File System:	Linux/reiserfs
System State:	Multi-user, run level 3

Notes/Tuning Information

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Tested by Supermicro Computer, Inc.

 +FDO: PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata
 +ACML  means -L<acml2.7.0-install-dir>/pathscale64/lib -lacml,
        which causes linking with AMD Core Math Library V2.7.0

 Baseline optimization
   C programs:       -Ofast -WOPT:mem_opnds=on +FDO
   Fortran programs: -Ofast -LNO:fusion=2 -OPT:fast_complex=on +FDO
 Portability Flags:
   178.galgel: -fixedform

Peak Tuning:
 168.wupwise:  -Ofast -LNO:prefetch_ahead=5:prefetch=3
               -OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3
               -IPA:linear=on:plimit=50000:callee_limit=5000
               -INLINE:aggressive=on
```

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Notes/Tuning Information (Continued)

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171.swim:     -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
172.mgrid:    -Ofast -CG:gcm=off -OPT:IEEE_arith=3:unroll_size=200
              -LNO:fusion=2:fission=1:blocking=off:prefetch_ahead=2
              -WOPT:mem_opnds=on:aggstr=0
173.applu:    -Ofast -CG:local_fwd_sched=on -OPT:ro=3 -TENV:X=3
              -LNO:fusion=2:fission=2:full_unroll_size=10000 +FDO
177.mesa:    -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on -WOPT:mem_opnds=on +FDO
178.galgel:   -Ofast -OPT:fast_complex=on +ACML +FDO
               RM_SOURCES=lapak.f90
179.art:      -O3 -OPT:Ofast -fno-math-errno -mno-sse2 -m32
183.equake:   -Ofast -CG:load_exe=2 -WOPT:mem_opnds=on -m32 +FDO
187.facerec:  -Ofast -LNO:fusion=2
              -OPT:fast_complex=on:IEEE_NaN_Inf=off:unroll_size=0 +FDO
188.ammp:     -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
              -fno-math-errno -TENV:X=4 +FDO
189.lucas:    -Ofast -OPT:ro=3:fast_nint=off:unroll_size=256 -WOPT:mem_opnds=on +FDO
191.fma3d:    -O2 -ipa -CG:load_exe=1 -OPT:Ofast:IEEE_arith=3:ro=3
              -WOPT:mem_opnds=on:retype_expr=on -IPA:pu_reorder=1 +FDO
200.sixtrack: -O3 -OPT:Ofast:Olimit=6000:early_intrinsics=on
              -fno-math-errno -CG:load_exe=1 +FDO
301.apsi:     -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2
Taskset utility used to bind CPU(s) to processes
Tested systems can be used with SC811S-520 case,
Memory populated at location DIMMA 1A, DIMMA 1B, DIMMA 2A, DIMMA 2B for CPU1 and DIMMB 1A, DIMMB 1B, DIMMB 2A, DIMMB 2B for CPU2
To ensure system stability, a 550W (minimum) ATX power supply [ 4-pin (+12V), 8-pin (+12V) and 24-pin are required]
Product description located as of H8DM8: http://www.supermicro.com/Aplus/motherboard/Opteron2000/MCP55/H8DM8-2.cfm
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